WHAT IS CLAIMED IS:

1. A system for monitoring activity and comfort of at least one subject, comprising:

at least one data acquisition unit; and

at least one control unit connected to said at least one data acquisition unit;

wherein said at least one data acquisition unit comprises a modular and variable set of sensors comprising a number of sensors, which nature and connection are combined according to needs of the at least one subject under monitoring.

2. The system for monitoring activity and comfort according to claim 1, wherein said set of sensors comprises main sensors selected in the group comprising movement sensors and cerebral activity sensors, and complementary sensors selected in the group comprising G sensor, GPS, tilt sensor, infrared sensor, echo sensors, magnetic sensoelectrodes, temperature probe, moisture meter, sound environment sensor and body imaging device.

3. The system for monitoring activity and comfort according to any one of claims 1 to 2, wherein said at least one data acquisition unit further comprises a signal-processor receiving data from said set of sensors, and an activity modulator connected to said signal-processor.

4. The system for monitoring activity and comfort according to any one of claims 1 to 3, wherein said at least one control unit comprises a communication device and a user interface.

5. The system for monitoring activity and comfort according to claim 4, wherein said communication device further comprises a signal processor including a memory and processing means.

6. The system for monitoring activity and comfort according to any one of claims 4 and 5, wherein said communication device is connected to a network.

7. The system for monitoring activity and comfort according to anyone of claims 4 to 6, wherein said communication device allows adjusting a transmission power between said data acquisition unit and said control unit.

8. The system for monitoring activity and comfort according to anyone of claims 1 to 7, further comprising a transport unit, which allows said at least one data acquisition unit to keep track of the activity of the at least one subject, and an environment unit which allows keeping track of environmental parameters.

9. The system for monitoring activity and comfort according to any one of claims 2 to 8, wherein said set of sensors comprises a wing-shaped piezoelectric sensor.

10. The system for monitoring activity and comfort according to claim 9, wherein said wing-shaped piezoelectric sensor comprises at least one piezo film coated with a flexible, non-allergenic and isolating material.

11. The system for monitoring activity and comfort according to any one of claims 9 and 10, wherein said wing-shaped piezoelectric sensor detects movements selected in the group comprising the at least one subject's rib cage movements, the at least one subject's diaphragm movements, the at least one subject's respiratory movements and the at least one subject's heartbeat.

12. The system for monitoring activity and comfort according to any one of claims 9 to 11, wherein said wing-shaped piezoelectric sensor comprises wings which position is able to be calibrated.

13. The system for monitoring activity and comfort according to anyone of claims 4 to 14, wherein said interface allows a person in charge of the at least one subject to be informed of a state thereof, to order a retroaction according to this state and to request complementary data selected in the group comprising a sound level, and video images.

14. The system for monitoring activity and comfort according to anyone of claims 2 to 15, wherein said temperature probe allows measuring a cutaneous temperature of the subject and comparing it to a reference temperature set as a comfort temperature zone.

15. The system for monitoring activity and comfort according to claim 14, wherein the comfort temperature zone is updated in relation to characteristics of the at least one subject selected in the group comprising its age, its size, a proper sensitivity thereof, its state of health.

16. The system for monitoring activity and comfort of according to anyone of claims 2 to 15, wherein the set of sensors is maintained in a close relationship with the at least one subject's body.

17. The system for monitoring activity and comfort according to anyone of claims 1 to 16, wherein said at least one control unit receives signals of a state of the at least one subject at intervals and provides alerts.

18. The system for monitoring activity and comfort of according to claim 17, wherein the alarms are triggered by states selected in the group comprising awaking of the at least one subject, absence of movement after a predetermined delay and position variations.

19. The system for monitoring activity and comfort according to anyone of claims 1 to 18, wherein said at least one control unit comprises modules selected in the group comprising sound modules and audio/video

modules and said at least one data acquisition unit is provided with devices selected in the group comprising a microphone, a loudspeaker, a radio receiver, a radio transmitter, a camera and a video transmitter.

20. The system for monitoring activity and comfort according to anyone of claims 1 to 19, wherein activity comprises activities selected in the group comprising rest, physical activity, absence of a movement, absence of respiration, a sleeping state, an awaken state, an active state, an intense active state, an intermediate active state and cerebral activity, and said monitoring comprises an assessment of a intensity and of a nature of said activity from a distance.

21. The system for monitoring activity and comfort according to any one of claims 1 to 10, wherein said data acquisition unit is integrated in a portable assembly.

22. The system for monitoring activity and comfort according to any one of claims 2 to 8, wherein said set of sensors comprises selected in the group comprising a G sensor and a tilt sensor to detect a fall of the subject.

23. The system for monitoring activity and comfort according to claim 22, wherein the system is used to monitoring activity levels before and after a falling event, thereby establishing an historical record of data and allowing a post event analysis of movement, and enable a remote monitoring wherein a non-response situation triggers an alarm.

24. A method for monitoring activity and comfort using the system according to anyone of claims 1 to 23.

25. A method for monitoring activity and comfort of at least one subject comprising the acts of collecting data, processing the collected data and transmitting the processed data to a person in charge of the at least one

subject, whereby said act of collecting data uses a modular and variable set of sensors comprising a number of sensors, which nature and connection are combined according to needs of the at least one subject under monitoring, providing a continued up dating and adjustment, in an intelligent way, to the at least one subject in relation to an environment thereof.

26. The method according to claim 25, whereby said act of collecting data comprises collecting main data, and collecting complementary data.

27. The method according to claim 26, whereby collecting main data comprises using sensors selected in the group comprising movement sensors and a cerebral activity sensors, and said collecting complementary data comprises using complementary sensors selected according to specific needs in the group comprising G sensor, GPS, tilt sensor, infrared sensor, echo sensors, magnetic sensoelectrodes, temperature probe, moisture meter, sound environment sensor and body imaging device.

28. The method according to anyone of claims 25 to 27, wherein said act of processing the data comprises evaluating the data in relation to preset threshold values and to criteria for threshold variation, obtaining a processing threshold value and intervals corresponding to levels of activity and comfort, comparing with stored levels or activity ing processed data.

29. The method according to anyone of claims 25 to 28, wherein said act of transmitting the data comprises sending the data to a control unit and displaying the data to a person in charge of the at least one subject.

30. The method according to claim 29, wherein said act of transmitting the data further comprises activating a retroaction unit.

31. The method according to anyone of claims 25 to 30, wherein said act of transmitting the data comprises adjusting a transmission power between a data acquisition unit used in the act of collecting the data and a control unit used in the act of processing the collected data.

32. The method according to claim 31, wherein said adjusting a transmission power between the data acquisition unit and the control unit comprises an act of identity validation, synchronization and communication protocol recognition, an act of emission of a periodic signal by the control unit, and an act of adjustment of an emissive power of the acquisition unit.